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§ 66. *Epiphegus Virginiana*, Bart., Var. *Rauana*, Austin.—Differs as follows: Plant smaller, more slender, of a very pale almost pure white color throughout (very slightly tinged with yellow) becoming yellowish brown in herbarium; bracts a little longer and narrower, particularly the pair at the base of the calyx; pedicels longer (sometimes $\frac{1}{2}$ inch or more long); calyx smaller and of a thinner texture, the teeth not keeled nor so broadly nerved; corolla more numerous and finely nerved, of a much thinner and more lax texture, the upper lip about 5 nerved, its apex much more vaulted and less broadly (until flattened out, indistinctly) notched, longer than the lower lip, teeth of the lower lip about one half as long and less complicate-keeled; stamens in pairs, barely didynamous, more exserted; stigma a little smaller; pod smaller; seeds a trifle narrower; the undeveloped corollas of the lower fertile flowers are much more narrowly conic; and it flowers two or three weeks earlier.—On the roots of the Beech, on the east side of High Peak, Catskill Mountains, Sept. 9th, 1875, about a hundred plants, more or less. On a three day's tramp we saw not a single plant of the typical form. RAU and AUSTIN.

EDITORIAL.—Mr. Austin is inclined to think his plant even more distinct than a mere variety. On the other hand, it appears to us merely a difference of form due mainly to premature and feeble development. We have found *Epiphegus* with the unopened flowers as early as the 19th of August and as far north as Hamilton Co., N. Y., and still more advanced in Morris Co., N. J., Sept. 1st. These earlier growths seem to us intermediate between Mr. Austin's and the common form.

Mr. Austin in his note speaks of an occasional malformation of the stamens, and we have found similar cases among our early flowering specimens. As the upper flowers seem to have lost their usefulness to the plant, we might expect them to show irregularities as a sign of degeneration, and, moreover, as the species itself seems to be entirely self-fertilizing, it is in accordance with theory that it should at length produce feebler forms, such as the present subject. The noting these forms affords valuable material for testing the theory. There are a number of our native plants which produce flowers of two sorts, the more showy of which are for the most part sterile, but particularly adapted to keep the vigor of the race by an occasional intercrossing. The study of these plants and a comparison of the various degrees to which the disuse has extended would be an interesting contribution to science.

Most plants have several modes of propagating themselves, two or more kinds of flowers, buds, rhizomes, etc., of which usually only one or two are used. But, if the reproductive energy is restricted in one direction, we generally find it expending itself in another. Thus a plant that spreads freely by its roots is sparing in blossoms, but may often be thrown into bloom by hindering the growth of the roots. *Epiphegus* seems to present an extreme case. While the pollen of the closed (cleistogamic) flowers is extraordinarily precocious and effective, there seem to be almost insuperable difficulties in the way of the fertilization of the open flowers. We

have, indeed, found the capsule of one (an early flowering specimen?) considerably enlarged and the flower falling off, but suspect that the fertilization was effected, before the flower was fully opened, by an accidental conjunction of the anther and stigma. And yet as the stamens are didynamous and the stigma at first protruding in advance of them and afterwards reflexed, the original plan would appear to be trimorphic. We hope to get further insight into this subject.

§ 67. **The cold of last winter.**—I have, during the past summer, made observations on the effects of the severity of the last winter on the trees and shrubs of the region between the Hudson and the Sound, as far as the Connecticut line. I have travelled in five different directions in distances ranging from seven to twelve miles. The Locust (*Robinia Pseudacacia*, L.) has suffered greatly. I have not seen any trees that are uninjured; some are entirely dead, others with dead tops. Even in groves containing more than a thousand trees every one is injured. I have also travelled along the shore of Long Island, immediately opposite, but did not notice a tree that had suffered. The foliage of our apple-trees has been small and of a pale sickly green, and fruit has been wanting. Two large specimens of *Hibiscus Syriacus* in my own inclosure, over twenty feet high and more than thirty years old, have died, and many smaller specimens in adjacent grounds were greatly injured or totally killed. Several varieties of *Rhododendron* which had heretofore been considered handy were destroyed. But the Coniferous Evergreens, so far as I have observed, have escaped injury.

White Plains.

O. R. WILLIS.

§ 68. ***Omphalaria pulvinata*, Nyl.**—I send a specimen of this plant, recently gathered by me from the rocks at this place, and which Prof. Tuckerman writes me is new to the flora of North America.

Poughkeepsie, Dec. 17th.

W. R. GERARD.

§ 69. ***Fissidens hyalinus*, Wils. & Hook.**—Dr. H. C. Beardslee, Painesville, Ohio, sends a specimen of this plant, one of the most rare and local of our Western Mosses, and writes: "The original locality near Cincinnati, where it was first discovered by the late Mr. T. G. Lea, is lost, and I am informed by Mr. Lesquereux that mine is the only locality now known."

§ 70. ***Agaricus (Tricholoma) Peckii*, Howe, n. sp.**—Pileus convex or expanded, viscid when moist, the separable pellicle when dry breaking up into small scales or areas, tawny red; flesh white; lamellæ narrow, close, sometimes branched, white; stem equal or slightly thickened at base, squamulose, white at the top, elsewhere colored like the pileus; odor farinaceous. Gregarious, 2—4 in. high, pileus 2—3 in. broad, stem 4—6 lines in diameter.

Ground in woods, Sandlake, N. Y., August. Young specimens sometimes have the top of the stem and the margin of the pileus adorned with drops of moisture of a reddish color.

Yonkers, N. Y.

E. C. HOWE.

§ 71. **Western Plants.**—I give you herewith some notes made on my trip from New York to Peoria and back via Mackinaw, Detroit, and the Great Western Railway of Canada, Buffalo, etc.—I